CLAIMS

1. A facilitator having a distributed configuration comprising cell apparatuses for conducting distributed processes, disposed between a server apparatus and a client apparatus connected through a computer network, for facilitating the server apparatus and the client apparatus so that they are concealed from each other,

wherein at least one of the cell apparatuses of the facilitator is a dual cell apparatus that functions as a query cell apparatus for conducting a process of behaving as a querier making a request and as an answer cell apparatus for conducting a process of behaving as an answerer giving an answer to the request, and the dual cell apparatus has functions of two cells for behaving as a query cell apparatus with respect to the server apparatus to transfer contents of a request from a querier to the server apparatus and for behaving as an answer cell apparatus to the request with respect to the client apparatus to transfer an answer from the server apparatus to the client apparatus.

2. A facilitator having a distributed configuration according to claim 1, wherein the cell apparatuses of the facilitator are classified on a group basis to form a plurality of groups, the dual cell apparatus is disposed on a border between the groups, and communication between the groups is conducted through the dual cell apparatus.

3. A facilitator having a distributed configuration according to claim 1, wherein the network includes a firewall, the server apparatus and the client apparatus are disposed across entities partitioned by the firewall, the dual cell apparatus is provided on the firewall, and the facilitator is configured across the firewall.

4. A facilitator having a distributed configuration according to claim 1, wherein, as a channel forming a data path, a plurality of dual cell apparatuses

are provided in parallel, whereby the plurality of channels, each forming the data path, are provided.

5. A facilitator having a distributed configuration according to claim 1, wherein the dual cell apparatus includes a temporary storing part for temporarily storing query contents and answer contents transmitted via the dual cell apparatus, and has a cache function of, in a case where the same query contents are repeated, omitting transmission of the query contents and providing answer contents corresponding to query contents stored in the temporary storing part.

6. A facilitator having a distributed configuration according to claim 1, wherein the dual cell apparatus includes an information rewriting part for rewriting information contents passing through the dual cell apparatus to send them, and the rewriting part holds information for converting an information format of one of the apparatuses communicating through the dual cell apparatus to an information format of the other apparatus, and converts an information format of input from the one apparatus communicating through the dual cell apparatus to an information format of the other apparatus to send it to the other apparatus.

7. A facilitator having a distributed configuration according to claim 2, wherein two dual cell apparatuses are disposed as a pair on a border between the groups of the cell apparatuses so that a transfer direction as the querier is opposite to a transfer direction as the answerer, whereby bidirectional communication between the groups of the cell apparatuses is made possible.

8. A facilitator having a distributed configuration according to claim 2, comprising at least three groups and a hub group for connection among the groups, wherein the hub group is connected to the respective groups via dual cell apparatuses, and all the dual cell apparatuses in the hub group are interconnected.

9. A dual cell apparatus disposed between a server apparatus and a client apparatus connected through a computer network, for facilitating the server apparatus and the client apparatus so that they are concealed from each other,

wherein the dual cell apparatus functions as a query cell apparatus for conducting a process of behaving as a querier making a request and as an answer cell apparatus for conducting a process of behaving as an answerer giving an answer to the request, and the dual cell apparatus has functions of two cells for behaving as a query cell apparatus with respect to the server apparatus to transfer contents of a request from a querier to the server apparatus and for behaving as an answer cell apparatus to the request with respect to the client apparatus to transfer an answer from the server apparatus to the client apparatus.

10. A facilitator having a distributed configuration comprising cell apparatuses for conducting distributed processes, disposed between a server apparatus and a client apparatus connected through a computer network, for facilitating the server apparatus and the client apparatus so that they are concealed from each other,

wherein at least one of the cell apparatuses of the facilitator is an integrated cell apparatus that functions as a query cell apparatus for conducting a process of behaving as a querier making a request, as an answer cell apparatus for conducting a process of behaving as an answerer giving an answer to the request, and a transfer cell for conducting a process of behaving as a transferer that transfers contents received from another cell to a predetermined transfer target cell apparatus, and the integrated cell apparatus operates by selecting one of behavior as the single query cell apparatus, behavior as the single answer cell apparatus, behavior as the single transfer cell apparatus, and behavior as a dual cell apparatus having two functions of behaving as a query cell apparatus with respect to the server apparatus to transfer contents of a request from a querier to the server

apparatus and for behaving as an answer cell apparatus to the request with respect to the client apparatus to transfer an answer from the server apparatus to the client apparatus, and the selected behavior can be changed.

11. An integrated cell apparatus disposed between a server apparatus and a client apparatus connected through a computer network, for facilitating the server apparatus and the client apparatus so that they are concealed from each other,

wherein the integrated cell apparatus functions as a query cell apparatus for conducting a process of behaving as a querier making a request, as an answer cell apparatus for conducting a process of behaving as an answerer giving an answer to the request, and a transfer cell apparatus for conducting a process of behaving as a transferer that transfers contents received from another cell to a predetermined transfer target cell apparatus, and the integrated cell apparatus operates by selecting one of behavior as the single query cell apparatus, behavior as the single answer cell apparatus, behavior as the single transfer cell apparatus, and behavior as a dual cell apparatus having two functions of behaving as a query cell apparatus with respect to the server apparatus to transfer contents of a request from a querier to the server apparatus and for behaving as an answer cell to the request with respect to the client apparatus to transfer an answer from the server apparatus to the client apparatus, and the selected behavior can be changed.

12. A computer-readable recording medium storing a processing program for realizing a facilitator that includes cell apparatuses for processing distributed processes, is disposed between a server apparatus and a client apparatus connected through a computer network, and facilitates the server apparatus and the client apparatus so that they are concealed from each other,

wherein the recording medium stores a dual cell function processing program including a query cell processing program for conducting a process of behaving as a querier making a request with respect to at least one of the cell

apparatuses included in the facilitator, and an answer cell processing program for conducting a process of behaving as an answerer giving an answer to the request,

a processing program in which a cell apparatus having been provided with the dual cell function behaves as a query cell apparatus with respect to the server apparatus to transfer contents of a request from a querier to the server apparatus, and

a processing program in which a cell apparatus having been provided with the dual cell function behaves as an answer cell apparatus to the request with respect to the client apparatus to transfer an answer from the server apparatus to the client apparatus.

13. A computer-readable recording medium storing a processing program for realizing a facilitator that includes cell apparatuses for processing distributed processes, is disposed between a server apparatus and a client apparatus connected through a computer network, and facilitates the server apparatus and the client apparatus so that they are concealed from each other,

wherein the recording medium stores an integrated cell function processing program including a query cell processing program for conducting a process of behaving as a querier making a request with respect to at least one of the cell apparatuses included in the facilitator, an answer cell processing program for conducting a process of behaving as an answerer giving an answer to the request, and a transfer cell processing program for conducting a process of behaving as a transferer that transfers contents received from another cell to a predetermined transfer target cell apparatus, and a processing program in which a cell apparatus having been provided with the integrated cell function processing program selects behavior as the single query cell apparatus, behavior as the single answer cell apparatus, behavior as the single transfer cell apparatus, and behavior as a dual cell apparatus having two functions of behaving as a query cell apparatus with respect to the server apparatus to transfer contents of a request from a querier to the server apparatus and for behaving as an answer cell apparatus

to the request with respect to the client apparatus to transfer an answer from the server apparatus to the client apparatus.